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Book review

Landolt–Börnstein. Numerical Data and Functional Relationships in Science and Technology. New series, Group II, Volume 17, Subvolume a. Magnetic Properties of Free Radicals; ed. by H. Fischer, Springer-Verlag, Berlin, 1987. viii + 507 pp. ISBN 3-540-16660-7. DM1280.

This sub-volume marks the commencement of a major programme of updating the data on the Magnetic Properties of Free Radicals contained in Volumes II/1 and II/9 a – d2 of this series. Twenty-two chapters are envisaged in this revision: this subvolume contains the first two substantial chapters. Literature coverage is up to late 1985; the data are mainly derived from EPR/ESR studies, with occasional ENDOR, microwave optical double resonance, electron spin echo, muon spin rotation, and laser magnetic resonance references.

The first chapter of 194 pages and about 700 references on inorganic radicals and radical ions is by J.R. Morton and K.F. Preston. Sixty-one tables cover radicals centred on atoms ranging from muonium to neptunium. Since "inorganic" is taken to mean "containing not more than one carbon atom" (except that ligands such as CO_2^- and CN are regarded as inorganic per se), the main organometallic interest of this chapter is the provision of data on "parent" radicals such as $SiH_3^{\cdot}$.

Chapter 2, on radicals in metal complexes, by A. v. Zelewsky, C. Daul, and C.W. Schläpfer, is longer (307 pages) but contains less than one-third of the number of references in chapter 1, partly reflecting the greater complexity of some of these radicals, and possibly a greater number of radicals per paper. The arrangement is by new-style groups of the periodic table, from 1 to 15.

This subvolume, and the accompanying subvolume reviewed below, are printed and produced with the high quality and clear layout traditionally associated with Landolt–Börnstein. It is a pleasure to look up data in such books.

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Landolt–Börnstein. Numerical Data and Functional Relationships in Science and Technology. New series, Group II, Volume 17, Subvolume b. Magnetic Properties of Free Radicals: Non-conjugated Carbon-centred Radicals, ed. by H. Fischer, Springer-Verlag, Berlin, 1987. vii + 551 pp. ISBN 3-540-16860-5. DM 1330.

This sub-volume is entirely devoted to a compilation by F.A. Neugebauer of the magnetic properties (mainly Electron Paramagnetic Resonance) of non-conjugated carbon-centred radicals, and supplements the earlier Volumes II/1 and 11/9b. The